



SOLBERG

The new standard in firefighting foam technology — worldwide

RE-HEALING Foam – An Introduction

November 2014

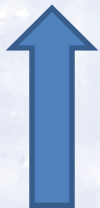


The Vehicle for Change

USEPA 2010 / 2015 Stewardship Program



2002
3M Exits Market PFOS



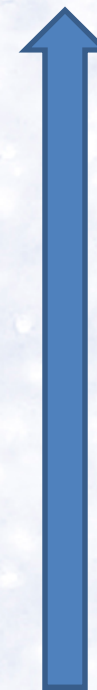
2010
European Union Bans PFOS



2013
Canada Bans PFOS



2010/2015
USEPA Stewardship Program PFOA



Change is Coming!

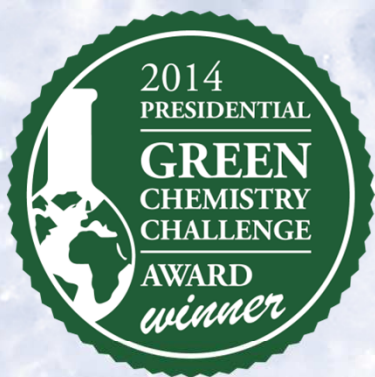
USEPA 2010 and 2015 Stewardship Program



Change From Mixed Homologs to C₆ Chemistry

Composition	90% Control	Extinguishment	Burn Back
Base C ₈ Chemistry (mixed homologs)	0:31	1:42	8% @ 5:00
	0:33	1:50	10% @ 5:00
Base C ₆ Chemistry	0:37	3:36	Not Done
+ 1.4% C ₆ Chemistry	0:33	2:15	20% @ 2:00
+ 11.4% C ₆ Chemistry	0:36	1:48	20% @ 3:45
+ 32.9% C ₆ Chemistry	0:37	1:30	S.E. @ 3:00
	0:29	1:25	20% @ 4:00
+ 39.7% C ₆ Chemistry	0:29	2:00	6% @ 5:00
	0:48	2:07	16% @ 5:00

The NEW CHOICE...



RE-HEALINGTM FOAM
AUTHENTIC FLUORO-FREE

Why RE-HEALING Foam?



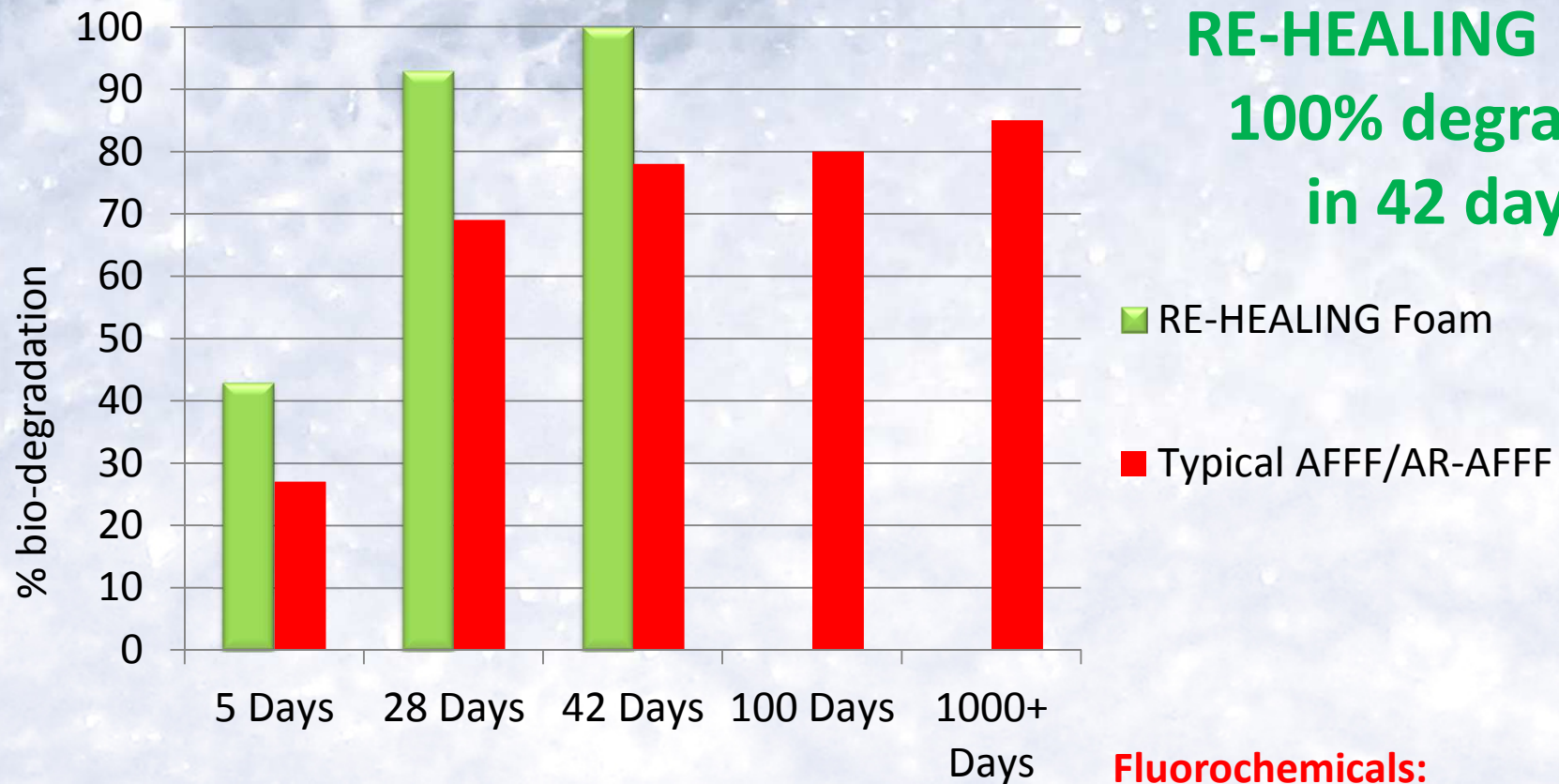
- ✓ **Compliant w/Environmental Regulations**
- ✓ **Commercial Off-the-Shelf Technology**
- ✓ **Environmentally Sustainable**
- ✓ **Safeguard Personnel**
- ✓ **Cost Effective Solution**
- ✓ **Live Fire Training**



Rate of Bio-Degradation



RE-HEALING Foam
100% degraded
in 42 days



Fluorochemicals:
WILL PERSIST IN THE ENVIRONMENT FOR
HUNDREDS OF YEARS; creating problems now and
well into the future

RE-HEALING Foam - Test Results

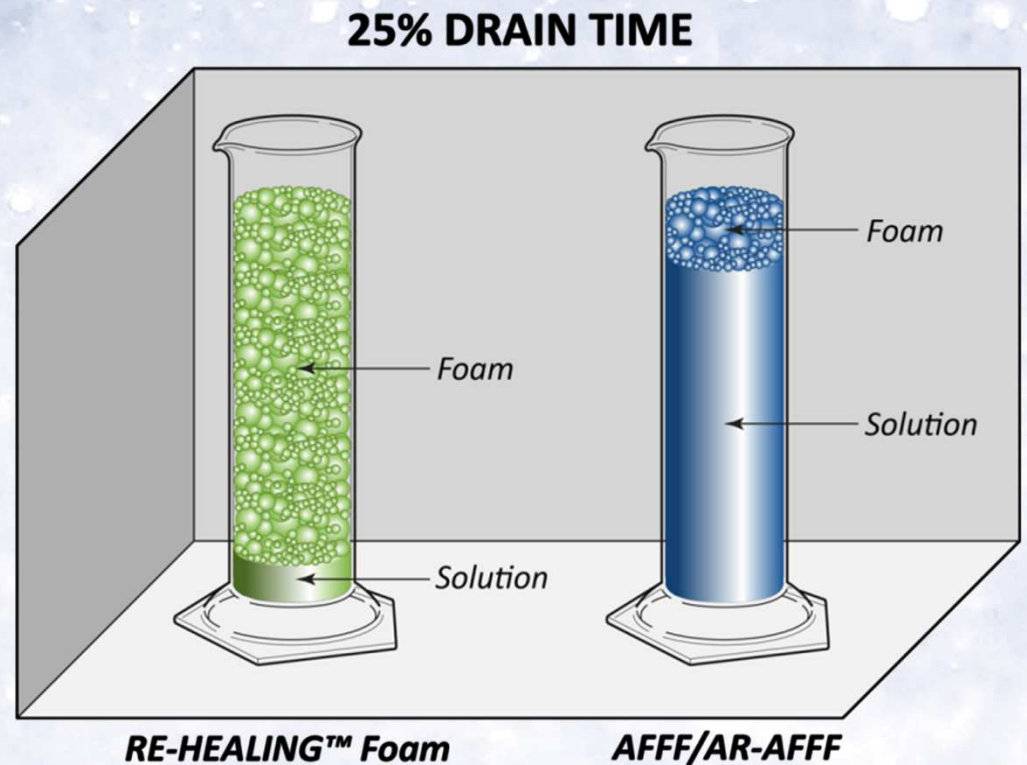


UL162 Fire Test – Heptane

Concentrate Type	Extinguishment Time	Foam Expansion Factor	25% Drain Time
RF3, 3%	1:30	3.7 - 8.7	30 - 75 min
RF6, 6%	1:32	3.8 - 6.5	45 - 90 min
3% AFFF	1:35	4.5 - 6.0	3 - 4 min
3x3% AR-AFFF	1:30	4.5 - 6.5	6 - 16 min
1x3% AR-AFFF	1:35	4.5 - 6.5	11 - 14 min

Foam Quality Testing (UL162)

RE-HEALING RF3, 3%	30 - 75 min.
3% AFFF	3 - 4 min.
3x3% AR-AFFF	6 - 16 min.



**Note: time required for 25% of the “foam” to drain back into “liquid solution”
(considered to render the foam ineffective)**

Proven Firefighting Performance



- ✓ **Rapid Knockdown**
- ✓ **Vapor Suppression**
- ✓ **Enhanced Securement / Burn-back Resistance**
- ✓ **Firefighter Protection**
- ✓ **Live Fire Training**
- ✓ **Global Acceptance**
- ✓ **Multiagency Certified**

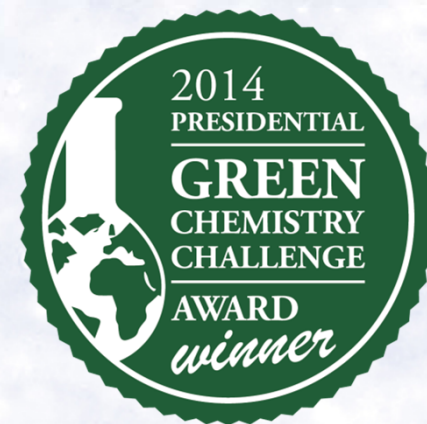


Next Generation Fire Fighting Foam Technology



RE-HEALING™ Foam (RF)

- RE-HEALING RF1, 1% Foam: EN
- RE-HEALING RF3, 3% Foam: UL, FM, EN, ICAO
- RE-HEALING RF6, 6% Foam: UL, EN, ICAO
- RE-HEALING RF3x6% ATC Foam: EN, ICAO
- RE-HEALING RF3x3% ATC Foam: Q1 2015



100% Fluorine Free

Developed from complex carbohydrates using hydrocarbon surfactants to create a fluid and stable foam bubble structure



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Solberg is a global company that is a one-stop resource for firefighting foam concentrates and custom-designed foam suppression systems. We are offering both traditional and innovative firefighting foam technology. www.solbergfoam.com

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